

DMOPC '20 Contest 3 P1 - Present Checking

Time limit: 2.0s **Memory limit:** 256M

Amy bought her N friends each a gift, and wrapped them all. However, in her haste, she may have labelled them wrong! She labelled all of the gifts with integers L_i , but she may have made a mistake and forgotten a friend, or given one friend multiple gifts. Can you help her?

Constraints

$$1 \leq L_i \leq N \leq 10^6$$

Subtask 1 [6/15]

$$1 \leq N \leq 2000$$

Subtask 2 [9/15]

No additional constraints.

Input Specification

The first line will contain N , the number of friends Amy has.

The next line will contain N space-separated integers L_i , the labels on the gifts.

Output Specification

If there are no duplicate labels and each friend from 1 to N received a gift, output `YES`.

Otherwise, output `NO`.

Sample Input 1

```
4
4 2 3 1
```

Sample Output 1

```
YES
```

Explanation for Sample Output 1

Each friend received a gift, and no friend received more than one gift, so Amy labelled her gifts correctly.

Sample Input 2

```
10
1 3 2 4 5 8 6 3 7 10
```

Sample Output 2

```
NO
```

Explanation for Sample Output 2

Note that friend number 9 did not receive a gift.